

certainly quite distinct from real animal motion. In an interesting memoir by Morren* on the genus *Aphanizomenon*, this botanist ascribes to the agency of electricity motions somewhat similar to those of the *Trichormus*: Morren's paper is ingenious and well worth perusal, but it must also be admitted that his theory is based on insufficient grounds, and his analogies rather far-fetched and fanciful.

I have to notice also the occurrence in company with the Alga just described of the *Aphanizomenon incurvum* of Morren, the only record of which as a British plant is that of Mr. Thompson of Belfast, who discovered it in Ballydrain lake in July 1838 (see 'Annals,' vol. v.). Shortly after this it was also found in the pond of the Dublin Zoological Gardens by Miss Ball, who possesses specimens from that locality in her collection.

In investigating the subject of the present paper I have been enabled to examine dried specimens of Mr. Thompson's Alga. For the opportunity thus afforded me of comparing my plant with the authentic *A. ? spiralis*, I am indebted to the kindness of Miss Ball, whose valuable collection that lady obligingly allowed me to examine, and by whom I was liberally supplied with any specimens I might require.

XXVI.—*Notice of several Cases of Defective and Redundant Organization observed among the Araneidea.* By JOHN BLACKWALL, Esq., F.L.S.

AMONG the numerous difficulties with which arachnologists have to contend in their endeavours to acquire a correct knowledge of the *Araneidea*, the great liability of those animals to run into varieties, and the close resemblance which some species bear to others, are not the least formidable; indeed, as circumstances conducing largely to the introduction of fictitious species on the one hand, and to the confounding of those which are distinct on the other, they have proved fertile sources of error and perplexity. Ample evidence of the accuracy of this statement may be obtained by a careful comparison of the writings of those naturalists who hold the highest rank as authorities in this department of zoology.

A considerable share of attention having been bestowed upon variations in the colour and size of species, resulting from differences in age, sex, food, climate, and other conditions of a less obvious character, while those arising from ex-

* Histoire d'un genre nouveau de la tribu des Confervées nommé Aphanizomène; lu à l'Académie Royale de Bruxelles le 2 Décembre 1837.—See Annals, vol. v. p. 82.

traordinary organic modifications, in consequence, perhaps, of their less frequent occurrence, have been almost entirely overlooked, the purport of the present communication is to illustrate by a few examples the importance which cases of the latter description possess in relation to physiology and systematic arrangement.

1. In March 1835, I found, under a piece of rock in a wood near Oakland, Denbighshire, an adult female *Theridion filipes*, Blackw., exhibiting an anomaly in organization which I never witnessed before in this order of animals; it had a supernumerary eye situated between the two small ones constituting the anterior intermediate pair, the total number of eyes possessed by this individual being nine, and their arrangement symmetrical.

2. An immature female *Thomisus cristatus*, captured at Oakland on the 20th of July 1835, had the two lateral pairs of eyes only, the four small intermediate eyes being altogether wanting, not the slightest rudiment of them being perceptible even with the aid of a powerful magnifier. The size of this spider was about one-fourth less than that of an adult.

3. In the summer of 1836, I took an adult female *Lycosa campestris* in my father's garden at Hendre House, Denbighshire, which had a short but perfectly-formed supernumerary tarsus connected with the base of the tarsal joint of the right posterior leg on its outer side.

4. An adult male *Lycosa Cambrica*, Blackw., taken in a marshy piece of land in a wood near Oakland in May 1839, was quite destitute of the right intermediate eye of the anterior row.

5. I captured an adult female *Epeïra inclinata* at Oakland on the 29th of August 1842, which was entirely without the left intermediate eye of the posterior row, and the right intermediate eye of the same row was not half the usual size.

6. An adult female *Ciniflo atrox*, Blackw. (*Clubiona atrox*, Walck.*), taken near Hendre House on the 14th of September 1842, wanted the left intermediate eye of the posterior row.

7. A collection of spiders made by Mr. Hamlet Clark near Towcester, Northamptonshire, in the autumn of 1842, and obligingly submitted to my inspection, contained an adult female *Epeïra inclinata*, whose right intermediate eye of the

* For the circumstances which have led to the separation of *Clubiona atrox* and other species from the *Drassidæ* and *Theridiidæ*, and to the establishment with them of the new family *Ciniflonidæ*, see the Transactions of the Linnæan Society, vol. xviii. p. 606 *et seq.*

posterior row was not one-eighth of the natural size, being merely rudimentary.

The particulars detailed in the foregoing cases, which serve to establish the fact, that spiders, in common with many other animals, occasionally exhibit instances of anomalous structure, derive no small degree of interest from their novelty; but when it is borne in mind that all the examples except one have reference to those important organs the eyes, important, not only as regards the function they perform, but also on account of the extensive use made of them in the classification of the *Araneidea*, that interest becomes greatly augmented.

Spiders with six and eight eyes have long been known to arachnologists, and Mr. MacLeay has recently published an account of one or two species discovered by him having two eyes only*. That spiders possessing four eyes will be found at a future period, when this neglected branch of natural science shall be more extensively and zealously cultivated than it has yet been, is highly probable; it becomes a matter of some consequence, therefore, to caution observers against mistaking a mere defect in structure, like that recorded in case 2, for such a discovery. Had the female *Thomisus cristatus*, in which that defect was noticed, been an undescribed species, and the only individual obtained, not a new genus alone, but a new family and tribe also would probably have been proposed for its reception †.

Whether there are spiders provided with an odd number of eyes or not is a more doubtful conjecture; should such exist, symmetry in the arrangement of their visual organs certainly may be expected to obtain; consequently, cases 4, 5 and 6, which present instances of an odd number of eyes disposed irregularly, would be regarded at all times with suspicion. Against case 1, however, no such objection can be urged; and as the spider there introduced to notice was undescribed when captured by me, I should have felt much perplexity in assigning it a place among the *Araneidea*, had I not been so fortunate as to procure other specimens of it at the same time.

Interesting chiefly in a physiological point of view, cases 3 and 7 show that a liability to irregularity in structure is not limited to the eyes, and that those organs are subject to preternatural variations in size as well as number.

I shall not attempt to speculate upon the cause of the organic modifications which form the subject of this article; to

* Annals and Magazine of Natural History, vol. ii. pp. 3, 4.

† The difference in the number of eyes with which spiders are provided has been proposed as the basis of their distribution into tribes. Transactions of the Linnæan Society, vol. xviii. p. 602.

attribute them to accidental circumstances would be, not merely to acknowledge ignorance of the matter, but to express that ignorance in most objectionable terms. The obscurity in which the origin of these remarkable phænomena is involved, careful investigation, conducted upon sound philosophical principles, can alone dispel.

XXVII.—*Description of a new species of Carex found near Hebden Bridge in Yorkshire.* By CHARLES C. BABINGTON, M.A., F.L.S., F.G.S., &c.*

[With a Plate.]

It is now nearly two years since Mr. S. Gibson of Hebden Bridge was so kind as to forward to me a *Carex*, which he had reason to believe would prove to be an undescribed species. At that time he had only ventured to publish it in Baines's 'Flora of Yorkshire,' as a variety of *C. cæspitosa* (Gooden.), but in his letters to me he expressed a decided opinion that it was distinct from that species. Although convinced that it was indeed distinct from *C. Goodenovii* (*C. cæspitosa*, Gooden.), it is only within the last few days that I have been enabled to examine its characters with the requisite care to qualify myself to publish it as a true species, and to study the descriptions and figures in the works that treat of this genus, so as to be enabled to say with confidence that it is an undescribed plant. As I have convinced myself of this, I have now the pleasure of naming it in honour of its discoverer, than whom no person can be more deserving of commemoration by means of a plant of this genus, to the careful study of which he has long and successfully applied himself.

CAREX GIBSONI.

C. spica mascula solitaria, femineis 2—4 oblongis basi attenuatis, infima breviter pedunculata, bracteis foliaceis, stigmatibus 2, fructibus lanceolatis in rostrum breve integrum attenuatis multinerviis gluma $\frac{1}{3}$ longioribus, acheniis late-obovatis apice rotundatis apiculatisque. Pl. V.

C. cæspitosa, β . chlorocarpos, *Gibs. in Baines's Fl. of Yorkshire*, p. 143.

Root creeping. Stems 6—8 inches high, triquetrous with flat or concave faces, the angles rough towards the top. Leaves from near the base of the stem, and usually about equalling it in height, flat, slender, slightly rough at the edges and midrib beneath, particularly towards the end. Bracts without

* Read before the Botanical Society of Edinburgh.